

Amendments to the Specification

Please replace the Abstract of the Disclosure with the following amended paragraph:

A [SAR radar] Synthetic Aperture Radar (SAR) avoids the need for an INS/GPS by focusing a SAR image having discernible features and a center. The image is formed from digitized returns, each of [said] the digitized returns having a phase and an amplitude. The focusing steps [are:] of an algorithm processing the digitized returns include

~~storing digitized returns acquired in an azimuth and a range coordinate system;~~
~~searching within said memory for returns descriptive of the features;~~
computing a coarse range and coarse range rate of the center of said the image
~~from the change in position of the features within the azimuth and range coordinate system;~~

motion compensating the digitized returns ~~forming the image using the coars range and coarse range rate to form a coarse image;~~

converting the digitized returns in polar format into an orthogonal Cartesian coordinate system, ~~where the digitized returns are adjusted in phase and amplitude to form an evenly spaced image data;;~~

autofocusing the evenly spaced image data to obtain a focused image;

performing a two-dimensional Fourier transform to obtain a focused image described by the returns;

~~testing the focused image for a focus quality;~~
computing an estimated (fine) range and (fine) range rate from features contained within the focused image[;], and

converting the fine range and fine range rate within the orthogonal Cartesian coordinate system for use within the azimuth and range coordinate system and motion compensating the digitized returns[;].

~~iterating the motion compensating step and subsequent steps using the fine range and the fine range rate until the attributes of focus quality reach a predefined level.~~

~~The autofocus step generates a phase error, said phase error is converted to an adjustment to said fine range. The adjustment is fed back to the motion compensating step.~~